

## Chapter 5.29

# Virtualization as a Process of Transformation of Small and Medium Enterprises (SMEs) in the Global Virtual Organizations

**Jerzy Kisielnicki**  
*Warsaw University, Poland*

### ABSTRACT

The chapter is devoted to the subject the transformation of SMEs due to the application of Information Technology (IT). These enterprises, despite their significant position in local economies, had limited possibilities while competing with large-scale enterprises (LSE) on the global market. Consequently, their role more and more often was reduced to the role of satellites. The use of IT has allowed SMEs to transform into virtual organizations and in this form succeed in the global market. The author has focused on the analysis of the following problems: virtualization as a direction of the development of SME, analysis of its strengths and weaknesses, and new opportunities and risks face medium-scale small construction enterprise that, by using information technology and creating a virtual organization, was able to defeat a large-scale enterprise (LSE)

in an international tender for construction of a hotel complex.

### INTRODUCTION

The development of IT has caused significant change in the functioning of individual organizations; it allows them to succeed in the emerging global market.

The author presents the view of Small and Medium Enterprises (SMEs) through the use of virtualization and IT services as a process. Virtualization changes dramatically the image of SMEs. Those enterprises that use new trends of IT development for their own development become fully competitive for large organizations, and transform to a new type of organization - the Global Virtual Organization. Virtualization has

been analyzed from a theoretical and practical point of view.

## **WHY SMEs?**

According to the principles adopted within the European Union (SMEs in Europe-2002), the notion of SMEs comprises three types of organizations:

1. Micro enterprises; employing up to 10 people
2. Small enterprises; employing from 10 to 49 people.
3. Medium-sized enterprises; employing from 50 to 249 people.

Large-scale enterprises are those employing more than 250 people.

In the international business, strength of traditional SMEs had been gradually decreasing. More and more often, it was resolving itself into the role of satellites for LSEs (Large Scale Organizations). This happened despite the fact that the potential of SMEs was significant. A comparative analysis of SMEs and LSEs operating in the European Union is presented in Table1.

Although approximately 99% of all organizations are SMEs—and they employ twice as many people as LSEs—their development has always

been difficult. Current constraints for development of SMEs are: economic, legal, psychological, and organizational. Specifically, two of the strongest constraints are: the barrier of scale of operating, and difficulties with an access to capital.

There is a common perception that SMEs are associated with a local market, and their operating in the global market is something extraordinary. Even if they have appeared in the global market, their offering has usually been limited to highly specialized products or services. As such, they were acting in the role of subcontractors of a large-scale organization or their outsourcers.

As mentioned earlier, SMEs have a limited access to capital. Large commercial banks, as a rule, do not grant them high credits. They consider SMEs not being credible enough. The financial institutions like Small Business Investment (SBIC), although useful, do not principally change difficulties in SMEs' access to capital.

In this chapter, the author presents the point of view that SMEs through the use of IT services—have become fully competitive for large-scale organizations. An organizational form that enabled SMEs to become competitive in the global market is establishment of network organizations, also called virtual organizations (Kisielnicki, 2002). Through virtualization, as L. Percival-Straunik (2001) writes, the process of integration and creation of global organizations has begun. This process is the basis for creation of a new quality in SMEs.

*Table 1. Essential measures describing functioning of SMEs and LSEs (data for the European Union for 2000).*

	<b>SMEs</b>	<b>LSEs</b>	<b>Total</b>
<b>Number of enterprises (1000)</b>	20,415	40	20,455
<b>Number of staff (1000)</b>	80,790	40,960	121,750
<b>Turnover per enterprise (mln ECU)</b>	0.6	255.0	1.1

*Source: Observatory of European SMEs, 2002, No. 2, p. 11*

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/virtualization-process-transformation-small-medium/9567](http://www.igi-global.com/chapter/virtualization-process-transformation-small-medium/9567)

## Related Content

---

### Mobile Commerce in South Africa

Anesh Maniraj Singh (2008). *Electronic Commerce: Concepts, Methodologies, Tools, and Applications* (pp. 1474-1482).

[www.irma-international.org/chapter/mobile-commerce-south-africa/9564](http://www.irma-international.org/chapter/mobile-commerce-south-africa/9564)

### The Implications of Unethical and Illegal Behavior in the World of E-Commerce

Adel Ismail Al-Alawi, Arpita Anshu Mehrotra, Hala Elias, Hina S. M. Safdarand Sara Abdulrahman Al-Bassam (2021). *Research Anthology on E-Commerce Adoption, Models, and Applications for Modern Business* (pp. 1656-1719).

[www.irma-international.org/chapter/the-implications-of-unethical-and-illegal-behavior-in-the-world-of-e-commerce/281581](http://www.irma-international.org/chapter/the-implications-of-unethical-and-illegal-behavior-in-the-world-of-e-commerce/281581)

### E-Trading Decision Making: An Integrated Digital Marketing Approach With Theory and Cases

Fatih Pnarbaand Habib Mehmet Akpnar (2020). *Tools and Techniques for Implementing International E-Trading Tactics for Competitive Advantage* (pp. 184-202).

[www.irma-international.org/chapter/e-trading-decision-making/235902](http://www.irma-international.org/chapter/e-trading-decision-making/235902)

### Do Skills and Challenge Affect Perceived Learning? Mediating Role of Engagement

Anitha Acharyaand Manish Gupta (2020). *Journal of Electronic Commerce in Organizations* (pp. 64-79).

[www.irma-international.org/article/do-skills-and-challenge-affect-perceived-learning-mediating-role-of-engagement/247419](http://www.irma-international.org/article/do-skills-and-challenge-affect-perceived-learning-mediating-role-of-engagement/247419)

### The Evolution of Intermediaries in E-Commerce

Nirvikar Singh (2016). *Encyclopedia of E-Commerce Development, Implementation, and Management* (pp. 37-47).

[www.irma-international.org/chapter/the-evolution-of-intermediaries-in-e-commerce/148947](http://www.irma-international.org/chapter/the-evolution-of-intermediaries-in-e-commerce/148947)